

AERONAUTICAL TELECOMMUNICATIONS NETWORK PANEL

CCB

**Internet Communications Service
Requirements Database**

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SUMMARY

The ATN Requirements Database has been developed in response to ATNP WG2 Action 9/33 (Munich). Following adoption of ICS SARPs at ATNP/2 and the setting up of the ATNP CCB, it is now necessary to revert the former decision to maintain ICS Database alignment within WG2, since the database is not a formal ICAO deliverable. This WP makes a recommendation to that end. The database will still be maintained by EUROCONTROL, outside the formal procedures of the CCB.

This document also summarises the changes from Version 1.0 as required to align to proposed ICS SARPs version 7.0, dated 23 January 1997.

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1. Introduction

The ATN Requirements Database has been developed in response to ATNP WG2 Action 9/33 (Munich). Following adoption of ICS SARPs at ATNP/2 and the setting up of the ATNP CCB, it is now necessary to revert the former decision to maintain ICS Database alignment within WG2, since the database is not a formal ICAO deliverable. The database will still be maintained by EUROCONTROL, outside the formal procedures of the CCB.

This document also summarises the changes from Version 1.0 as required to align to proposed ICS SARPs version 7.0, dated 23 January 1997.

2. References

[REF 1] Internet Communications Service Draft SARPs, proposed version 7.0, 23 January 1997

3. Recommendation

It is recommended that further formal maintenance of the database by WG2 is no longer required. The database will instead be provided informally to the CCB and all who wish to use it.

Note: EUROCONTROL, as the editor of the database, will continue to maintain it and to distribute it through the ATNP distribution channels (mailing list announcements and file archive).

4. Overall Database Description

Data is mainly extracted from the SARPs. Additional tables have been created in order to organise the information and to ease presentations in forms and reports.

4.1 Startup

At startup, the user is proposed with a menu from which he can:

- Select a Conformance Group, using the **Select Conformance Group** form
- Edit/View ATN Requirements support value, using the **ARL Tables** form
- Print the ATN Requirements tables, using the **ARL Tables** report

4.2 Tables extracted from the SARPs

The ICS RDB data is made of two sets of tables:

- the APRLs extracted from the SARPs, and
- newly defined ARLs (ATN Requirements Lists) which summarise in APRL-like format the requirements and recommendations that do not have an APRL reference. In order to keep these tables to a reasonable size, requirements have been grouped with a granularity which often corresponds to SARP sub-sections. Recommendations, however, are always singled out.

These two sets of tables have been harmonised such that they can be displayed to the user and printed in a unique format.

A new status notation "REC" has been introduced to refer to ATN recommendations. With respect to PICS notations, it has the same semantics as "O".

All ATN requirements information is now stored in the following database tables:

ARL Table List	Each row describes an ARL or an APRL table: title, group, applicable base standard, etc.
ARL Entries	Requirement description and references. It contains APRL row information except status.
ARL Status	Contains Status Information per conformance group

4.3 Supporting Tables

Conformance Groups	<p>Since not all requirements apply to the same type of systems, seven classes of implementations were defined. When viewing, editing or printing any part of the database, the user will be prompted for the applicable conformance group.</p> <p>The groups identified so far are:</p> <p><i>ATN Network</i>: the requirements apply to a deployed ATN network. They are normally implemented by network integrators, system managers, network managers and operational procedures.</p> <p><i>ATN Subnetwork</i>: the requirements apply to real subnetworks candidate for integration into the ATN.</p> <p><i>End Systems, Ground-Ground BIS, Air/Ground BIS, Airborne BIS, Non-BIS Intermediate System</i>: the requirements apply to the corresponding type of system (in the OSI meaning of the word, i.e. ES or IS). They are normally implemented by system developers and system integrators.</p> <p>The 7 router classes defined in Table 5.2-1 map to the conformance groups as follows:</p> <table style="margin-left: 40px;"> <tr> <td><i>Router Level 1, 2, 3</i></td> <td><i>Non-BIS Intermediate System</i></td> </tr> <tr> <td><i>Router Level 4</i></td> <td><i>Ground-Ground BIS</i></td> </tr> <tr> <td><i>Router Level 5</i></td> <td><i>Air/Ground BIS</i></td> </tr> <tr> <td><i>Router Level 6, 7</i></td> <td><i>Airborne BIS</i></td> </tr> </table>	<i>Router Level 1, 2, 3</i>	<i>Non-BIS Intermediate System</i>	<i>Router Level 4</i>	<i>Ground-Ground BIS</i>	<i>Router Level 5</i>	<i>Air/Ground BIS</i>	<i>Router Level 6, 7</i>	<i>Airborne BIS</i>
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Conformance Statement Values	This table holds user's responses supplied in the support and note columns. It can be used to record PICS information on a given ATN implementation.								
Predicates	This table collects all cross references to option notations and predicates used in ARL/APRL status columns. It is used to enhance the dynamic checks by the user when editing conformance values.								
Sub-Volume 5 Contents List, Sub-Volume 5 Cross-References	<p>These tables contain the Sub-Volume 5 table of contents information and cross references between ICS RDB entries and the section to which they refer. When the exact reference given in ARL/APRL is a paragraph, cross-reference is given to the nearest enclosing section.</p> <p>These tables are not used currently by any query, form or report. They are provided for people willing to develop additional functions into the database. They are also helpful when drafting VRCIs to trace impacted tables in the RDB.</p>								

4.4 Viewing ARL tables

The user can view ARL tables by opening the **ARL Tables** form. The same form is used to edit conformance statement information.

Only the tables that apply to the selected conformance group will be shown. The user can change the conformance group at any time by clicking on the "Select Conformance Group" button at the top of the

window. Please note that this action does not delete previously entered support information. A manual deletion of support information contained in **Conformance Statement Values** table may be required.

Notations/Predicates applicable to the current table are shown at the bottom of the window. When available the value of the predicate is also shown.

In case several conformance statements need to be specified, it is recommended to either:

- clone ICSRDB.MDB as many times as needed and rename the files appropriately, or
- when conformance statement is complete, export **Conformance Statement Values** table to a separate MS Access file (File|Export command).

In both cases it may be useful to define an identification table to store context information on the conformance values being defined (e.g. implementation name, type, contact point, etc.)

4.5 Printing ARL tables

The user can print his conformance statement with the **ARL Tables** report. The report includes a summary list of the tables that apply to the selected conformance group.

5. Migration from Version 1.0

5.1 Modified tables

Changes from ICSRDB Version 1.0 are summarised in 3 new tables:

zV2-0 ARL Item Renaming	This table contain the modifications into APRL Item indexes due to typos corrections. Since this element is used as a primary key for the database references (i.e. must be unique and consistently maintained throughout all tables) it must be changed first in all tables.
zV2-0 ARL Entries Modifications	This table contain the modifications to the "ARL Entries" Table. Empty fields mean that the corresponding field is unmodified
zV2-0 ARL Status Modifications	This table contain the modifications to the "ARL Status" Table. Empty fields mean that the corresponding field is unmodified

5.2 Importing Support Information supplied in ICSRDB v1.0

For the time being, the import of ICSRDB version 1.0 support information (contained in "Conformance Statement Values" table) has not been automated.

The steps to import the version 1.0 information are as follow:

1) Attach the v1.0 "Conformance Statement Values" table using the File|Attach File... menu command. The commands prompts for the Microsoft Access file name of your version 1.0 database. After a successful import, the database window should show a special attach entry for a new table called "Conformance Statement Values1" as shown on the following picture:



- 2) Run Query "zV2-0 Import V1-0". This query imports the information on all entries that have identical Item keys, i.e. all entries but those listed in "zV2-0 ARL Item Renaming"
- 3) Run Query "zV2-0 Import V1-0 bis". This query imports the remaining information on entries that have been renamed as specified in "zV2-0 ARL Item Renaming"
- 4) Check new and modified entries. Verify that the support column is consistent with the required status.